EDF Comments on CPUC California Customer Choice Project Draft Gap Analysis

James Fine, Director of Energy Research & Senior Economist, Environmental Defense Fund

Andy Bilich, Clean Energy Analyst, Environmental Defense Fund

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Environmental Defense Fund (EDF) wants to thank the Commission and the staff for the opportunity to provide comment on the Customer Choice Project Gap Analysis. We believe the gap analysis is a valuable effort and an interesting forum to proactively identify barriers and leverage points, develop a coordinated strategy, and systematically work to progress flexibility, customer access, efficiency, and equity in our energy system all while actively supporting state climate and energy goals. EDF wants to specifically highlight and respond to a few key sections of the gap analysis as described below.

Data Access

Customer and third party access to energy data is critical for creating opportunities for energy efficiency and conservation, GHG emissions reductions, and economic savings for customers and the grid as a whole. As the Commission notes there are several issues with the current landscape for data access and data sharing. EDF concurs with those outlined in the Gap Analysis, and we highlight a few further issues related to aggregate data access and non-electronic pathways for securing data access.

EDF suggests broadening the scope of access for aggregated data for cities to include actions and initiatives outside the framework of a formal Climate Action Planning process. For example, EDF previously was working with a city councilmember who was looking to get aggregated electricity and gas data for their district to help explore the viability of community scale clean energy initiatives for small businesses and residents including community solar, efficiency drives, and EV car sharing. Specifically, the councilmember sought to acquire hourly load data aggregated at the community scale to identify opportunities to reduce the emissions footprint of electricity used in her jurisdiction. These aggregations satisfied the thresholds established by the PUC. Nevertheless, after extensive delays, the LSE never provided the data that the councilmember requested in a format that would be useful for analyzing the emissions and economic benefits of clean energy initiatives in the district.

Despite constant back and forth with the LSE over several years, EDF was unable to access the requested data, and the limited data that was provided was redacted because of privacy concerns. In its reevaluation of data access procedures and rules, EDF encourages the Commission to consider pathways for local leaders to access data to help develop clean energy solutions for their communities, even if it is not tied to an official climate action plan.

The data aggregation thresholds have also been a stumbling block in EDF's work with customers, particularly on the residential side. EDF understands the need to protect customer privacy, but when

customers share their data with 3rd parties they do so with the expectation that there will be some benefit in return. Sometimes these thresholds can hamper that, particularly in areas with low concentrations of customers such as the smaller communities in the Central Valley. In EDF's own work, we were unable to utilize the small business electricity data we collected to develop proposals to try to bring energy efficiency solutions back to those customers because we did not meet the 15 business threshold in the zip code. The Commission should explore a way for non-market participants to access anonymized data to advance state energy policy goals.

Further, there is also a need to review the non-electronic pathways for securing access to customer data. When customers do not have access to the internet and/or have not set up online accounts with their utility, they must instead fill out and submit forms to their utility. Not only are the forms quite complicated, both to find on the utility websites and to understand, but once filled out there is no guarantee that the request will be serviced. In EDF's work, only 50% of the submitted physical forms on behalf of low income customers led to actual data access. The utility rationale was limited as to why the remaining 50% were incorrect, and there was no way to involve the Commission to help resolve the disputes. Low-income customers could perhaps benefit the most by accessing data to reduce their energy burden, and EDF contends that the Commission should be more proactive in resolving these types of disputes, especially when low-income customers may not be able to access data online via a "green button". Difficulty with this pathway and its higher transaction costs severely limits the ability of solutions providers and the state to engage with customers, especially those in disadvantaged communities where this pathway is likely to be more needed.

Finally, the Commission should look for pathways to incenting new data to quickly and cost effectively identify vulnerable ratepayers and ratepayers who are likely to be good candidates for DER solutions, including high user surcharge ratepayers, amongst others. Much of this data exists in the IOU systems presently, however it isn't necessarily being utilized to full effect to help connect vulnerable customers to solutions that can help them manage their energy use and reduce their utility bills. This highlights the need for alternative pathways such as utilizing community capacity to help connect vulnerable homes to the solutions designed to support them.

Disclosure of GHG and Renewables Content

EDF believes that the Commission has a more active role to play in disclosure of the load serving entities' embedded GHG emissions and renewable percentages. While EDF applauds the California Energy Commission's (CEC) progress on the power content label, that process will not suffice to help customer choice. The CEC power content label meets the statutory requirements, but does not provide all of the information that customers would want in making a choice on its electric service provider.

The Commission has the regulatory oversight to both certify Community Choice Aggregators (CCA) and register Electric Service Providers, and broad authority over the incumbent investor owned utilities. The Commission should use this authority to ensure that there is consistent regular updates to the power content information, especially at the time of a new entrant. For example, the Commission has the

ability to mandate on-bill disclosure of the load serving entity's GHG emissions and renewable content compared to a statewide average.

EDF notes that there is inconsistency between different CCAs and incumbent utilities, particularly at the time of a CCA launch, on how customers can compare GHG emissions and renewable content. This inconsistency leads to customer confusion and marketplace uncertainty. The Commission could modify the code of conduct rules to allow for a neutral comparison between times of transition, such as the launch of a new CCA.

The Commission should also consider using ratepayer funds to establish a California Electricity Choice comparison website (akin to PlugInIllinois.com as discussed in the gap analysis), with a focus on rate, average residential customer bill, and the disclosure of how many renewables are being generated locally (within a defined distance), in-state, via REC-only transactions, and overall GHG emissions content, just to name a few.

Finally since emissions intensity on the grid varies dramatically at hourly and sub-hourly scales, the information in the labeling should help ratepayers appreciate the value of load shifting within the day, and this information should harmonize with the marketing, education, and outreach done in support of the rollout of TOU rates.

Distribution Grid Services

A gap that EDF has identified previously on the distribution side is the lack of communication and coordination amongst the various proceedings and processes.

Unfortunately, the DER capacity and capabilities incentivized by new rate design and technological innovation are not effectively integrated into the Integrated Capacity Analysis (ICA) and Locational Net Benefits Analysis (LNBA) that the IOU's include in their Distributed Resource Plans (DRPs). Thus far, ICA assumes that DERs (unless acquired through utility controlled RFPs) will only degrade grid conditions (e.g., thermal limits on transformers, frequencies, voltages), and does not model the potential for DERs to avoid degrading and perhaps provide benefits to the grid as the LNBA process is supposed to identify.

For example, distribution system engineers make a planning assumption that they must be able to serve all of the load on a distribution node even if a large portion is served by in situ generation (aka, rooftop PV). While this is a reasonable planning assumption when only a few rooftop PV systems are in place, it becomes increasingly unlikely that all of the in situ generation will go offline simultaneously as more systems are added. At this point, California has large capacity of rooftop PV installed so planning a distribution delivery system that ignores these resources is already causing redundant investments, notably in IOU grid modernization proposals.

Sticking with the example, a better approach to ensuring a reliable and least-cost distribution system will be to use ICA to determine when, due to the level of penetration of existing and forecasted DERs, there is need to transition to incentives (and/or standards) to ensure that future DERs support the optimization of hosting capacity and minimization of distribution system investments.

LNBA could calculate the value of DER services to the grid (e.g., avoided damage, avoided transmission and distribution upgrades) and translate that value into a price signal (incentives and/or marginal prices to be part of retail rates). The process of determining the locational impacts of a DER (or portfolio of DERs) generally first requires a determination of the impact of the DER on the electric grid (using ICA as above). This can start with something like Distributed Energy Resources Avoided Costs (DERAC) values and expand to include additional more granular values like flexible resource adequacy procurement, voltage and power quality, transmission and operating expenditures, and societal avoided costs. Second, the process requires a translation of that impact into cost—whether an avoided cost or an increased cost. Finally a mechanism is needed to aggregate those cost impacts into a single present value of locational net benefit impact, which could then be included in the ICA. Over time, the LNBA would update as customers/markets respond to the price signal; and as the LNBA values change over time so too would the procurement of DERs.

Procurement of distribution infrastructure or alternatives (DRP, ICA) **should** include the utilities planning for customers to respond to retail prices (TOU, dynamic pricing, and other types of financial and informational incentives, such as content labels described above) that signal where customer-sited distributed energy resource capabilities will be valuable to the grid (LNBA).

The process that EDF recommends can help ensure greater value for customers and more cost-effective distribution planning reflective of customer choices, behavior, and uptake of technology.

Rate Design

For rate design, empowering customers with a menu of rates including options that incentivize customer behavior and the uptake and utilization of DERs in support of climate goals should be the principal focus of the Commission on rate design and customer choice. To the extent feasible, the Commission's ambition for rate design should be increasing rates precision in time, place and product, as suggested in the RMI paper Rate Design for the Distribution Edge. This precision is a key part of the info that rate payers need to be empowered, and to efficiently get to state goals. Finally, true customer empowerment will also require that the rate options are coupled with actionable information and a removal of barriers like technology access, awareness, 3rd party participation/support, transparency and capture of price signals, etc.

Specific to TOU rates currently underway, TOU differentiation should be applied to all costs, including - to the extent feasible - transmission and distribution costs. In addition, in order to make TOU rates more readily understandable and to provide a strong incentive to use energy at times most beneficial to the grid, the environment, and ultimately the customer, different TOU periods should have a robust price differential between peak and off-peak periods.

TOU rate periods should also differ by customer class and/or segment in order to reflect principles of cost causation and fairness. To that end, the Commission should consider distinguishing customers by load shape, capabilities, and location, but not by the specific technologies they use to manage their energy use. Instead of allowing utilities to isolate customers with solar photovoltaic energy, the Commission should require enhanced focus on more vulnerable customers. This will ensure that

vulnerable customers have the proper education and capabilities to benefit from TOU rates and those customers who can provide grid services through the effective use of DERs are provided encouragement to harness that capability through a "smart home rate".[1]

Finally, in order to ensure the needed level of customer engagement, the Commission should consider allowing third party DER providers to propose programs and price structures that allow the providers and utilities to remain at least revenue neutral.

POLR

EDF suggests that the legislature adopt a bill requiring the Commission to open a rulemaking to establish the definition of Provider of Last Resort. As discussed in both the final report and the gap analysis, the legislature has not defined what it means in California to be a provider of last resort. The Commission has extensively litigated the "carrier of last resort" for telecommunications firms, including the service quality and other issues related to being the last provider. While CCAs and ESPs have bond requirements in case of failure, there is no designation of who will serve the customer in times of failure. We can presume that the incumbent investor owned utility, which has an obligation to serve, will be the provider of last resort. However, this presumption may not be prudent.

As discussed in the final report, there are other methods to establish the POLR, such as the "Supplier of Last Resort" reverse auction mechanism. The Commission should recognize that in the instance that there is a need for a POLR, there could well be short-term consequences of transferring customers from one provider to another. The Commission should ensure that customers are not defaulted onto a provider of last resort that does not meet certain reliability, affordability and sustainability metrics. Customers should not be made worse off if their POLR (where the transfer may occur without the customer's choice) on carbon and renewable content, unique rate offerings, etc. While no two providers are identical, and all providers may meet minimum state standard thresholds, the Commission has the opportunity to ensure that customers are not harmed by inferior actors who seek to enroll new customers under the "POLR" label. EDF contends that the Commission has the expertise to litigate the nuances between obligation to serve and POLR and to create a structure to identify and designate (either in advance or elected at the time needed) the POLR, and the consumer protections required at the time of a transfer.

Reliability and resource contracting

In the context of integrated resource planning there are several issues that EDF would highlight as important considerations for the commission in the context of consumer choice including:

- **Need for consistency across integrated resource plans, particularly with respect to emissions** – In the IRP process there has been a significant amount of variation among LSEs in the emission

[1] Phase 1 Opening Testimony, Including Errata Pages, of the Environmental Defense Fund, Order Instituting Rulemaking on the Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations, R. 12-06-013 at 13-14 (filed Sep. 15, 2014).

analyses conducted, particularly for disadvantage communities. Ratepayers and the state are entitled to more transparency and clarity on GHG impacts from the electricity procured on their behalf (see above section for more detail)

- **Integration of building and transportation electrification** – Beneficial electrification of vehicles and buildings has been underrepresented in the IRP planning process which limits the potential benefits to customers and creates barriers to new customer choice in electrification
- **Coordination with other proceedings** – As with other areas, the IRP process should be more coordinated with other processes like the long term procurement plan, resource adequacy proceeding, CAISO transmission planning process, etc. to ensure that analysis and decisions are informed by essential regulatory building blocks. Likewise, the IRP process should also inform DER and RA filings. All of this ensures that the state's procurement on behalf of customers is as cost-effective and beneficial as possible.
- **Integrating pricing and rate design elements** – Without transparent, cost-based prices, ratepayers have little to no ability or incentive to respond to a grid that is shifting away from utility-scale resources and control, except through attempted interventions at the regulatory and/or legislative level, a cruder and less predictable vehicle. EDF recommends that LSEs specifically identify how they propose to deploy pricing as a way to ensure resources are effectively integrated into the grid. This should include a commitment to advance specific proposals for rate periods and price differentials in the appropriate proceeding, as well as deployment of tariffs to help achieve goals.

Further, EDF recognizes that either a centralized procurement entity (such as a Power Authority) or a coordinated multi-party procurement for small load serving entities may be needed to procure large scale in-state renewables. For the investor owned utility's procurement, non-market participants were able to advise the Commission on the reasonableness of the procurement process through the Procurement Review Group. The Commission should recognize that there is no systematic way for non-market participants currently to advise Community Choice Aggregators on their procurement choices. If consolidation of procurement were to occur to help ratepayers buy down costs of renewables by reducing risks, EDF contends there should be a way for non-market participants to continue to advise decision-makers.

Electrification

EDF is excited to see a more robust and coordinated vision on beneficial electrification.

On building electrification, given the complexity of the space and the number of forums it touches, EDF would encourage the Commission to start to think through a more coordinated roadmap. Specific to customer choice, EDF wants to highlight a few issues that need to be proactively considered by the Commission including:

- **Stranded assets and pathways for gas utilities** – One of the most critical pieces to address is the impact on the existing gas utilities and gas infrastructure and how to proactively manage this transition. As more customers choose natural gas alternatives in their homes and businesses, it

will be critical for the Commission and other actors in this space to develop solutions that help to manage and mitigate the financial risk and impact from stranded assets and increased gas rates and ensure that this risk/impact doesn't hinder momentum in the space. In this vein, there are many strategies that will need to be evaluated including accelerated depreciation and gas substitutes like hydrogen and renewable gas. The more systematically this issue can be considered by the Commission the better off we will be. To that end, opening a proceeding specifically to identify the magnitude of the issue and evaluate various pathways for addressing it should be a focal point of the Commission's strategy.

- **Rising electricity rates** – Similarly, it will take continued and intentional efforts to preserve the building electrification choice for customers, particularly in our current landscape of high (and growing) electricity rates. Among other efforts, this will necessarily need to include new and improved rate designs and incentive programs supporting customers choosing to support decarbonization goals and evaluation of new opportunities for public purpose programs to support electrification.
- **Targeting of building electrification efforts** – A strategy needs to be developed to better target electrification efforts to where they can have the most impact and/or the best chance of success. There are several factors that could be considered including targeting communities or areas that could avoid upcoming gas investment (i.e. a NWA equivalent for gas), areas where stranded assets can be avoided, areas that could help retire a particularly leaky section of gas distribution, areas with high EV penetration as they would be more likely to have already done panel upgrades, low income communities, etc. Having this more strategic approach to building electrification can help to maximize customer and grid benefits.
- **Equity** – Any strategy in this space needs to proactively work to deliver building electrification and decarbonization as an opportunity for all communities. With the high capital costs and awareness barriers (among other issues) for natural gas alternative technologies, under business as usual low income communities are likely to be the among the last groups to benefit from the new technology and electrification. What's worse is that they will also be left with the increasing gas rates on the other side. How exactly to address this concern and ensure that all communities have the opportunity to choose lower carbon alternatives for their buildings will be critical to Commission planning in this space.

For vehicle electrification, EDF would like to highlight the importance of the VGI efforts by the CEC and CPUC and suggest the following areas for continued consideration in ongoing efforts:

- **Improved customer experience** – The Commission should leverage the lessons learned from the SB 350 transportation electrification applications to enhance the ability to provide consumers with important and correct information about electric vehicles, rate design, and rebates/incentives.
- **Prioritize and track benefits of EV deployment and charging in disadvantaged communities** – The Commission should work to develop a more comprehensive understanding and inventory of the Existing and ongoing initiatives undertaken by communities and local governments in low-

income and disadvantaged areas, such as the Green Raiteros project from the LEAP Institute in the City of Huron, and how they can positively or negatively impact EV deployment and grid integration as a whole.

- **Increase the potential number of electric vehicle service equipment hosts** – By allowing customers the option for utility ownership, operation, and maintenance of charging assets, it may become more attractive for customers to invest in electric vehicles. This can be a critical component of growing the EV market, particularly in the more nascent medium and heavy-duty sectors. As such, the Commission should consider the appropriateness of utility ownership of EV assets in specific deployment contexts.
- **Track and incentivize GHG benefits for EV charging** – As part of growing EV deployments and incentives, the Commission should be working proactively to ensure GHG benefits for ratepayers are maximized. As one strategy, this can include utilizing a vehicle like the GHG co-optimization signal currently under exploration in the SGIP storage proceeding as a way to optimize EV charging to drive GHG benefits.